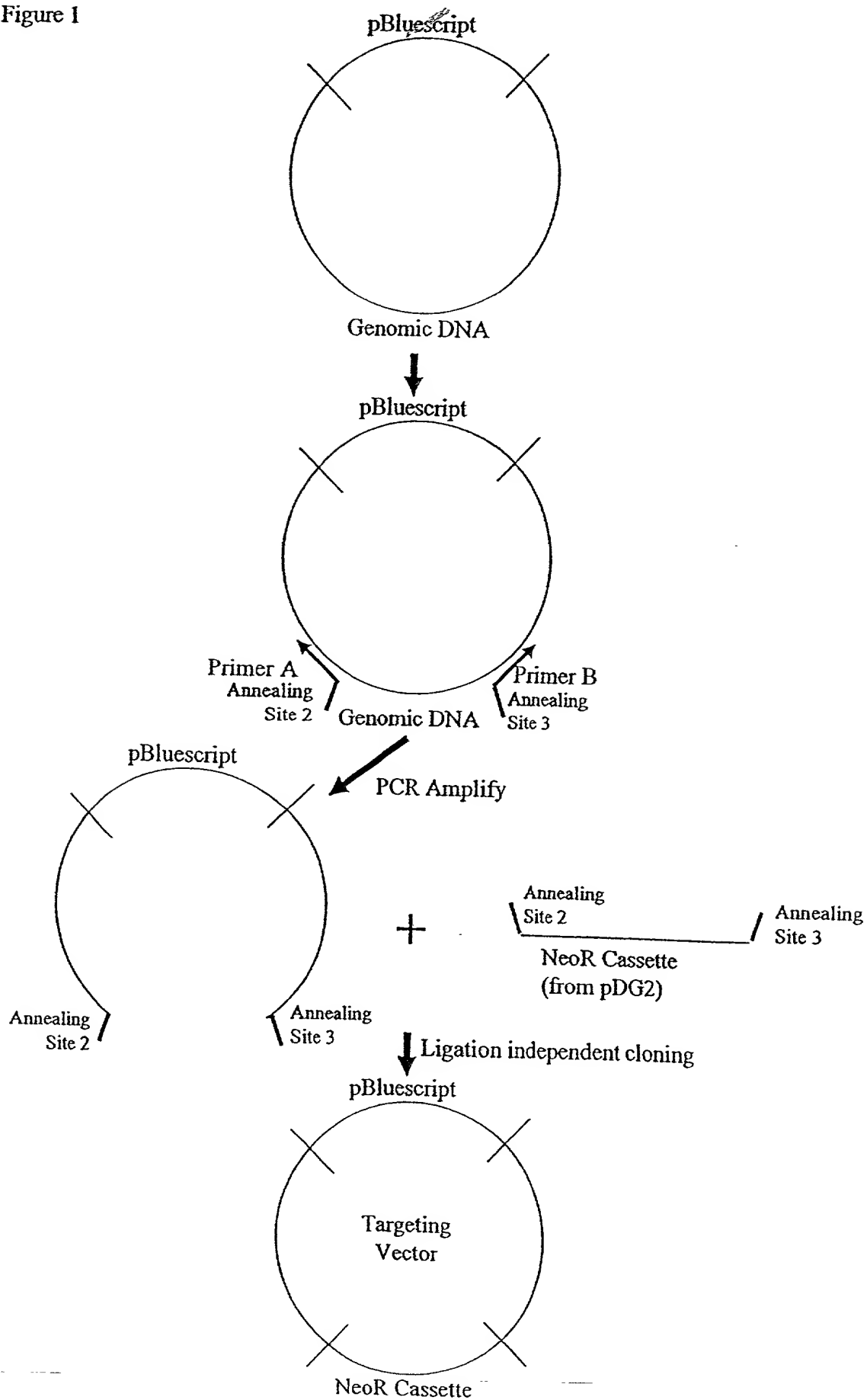
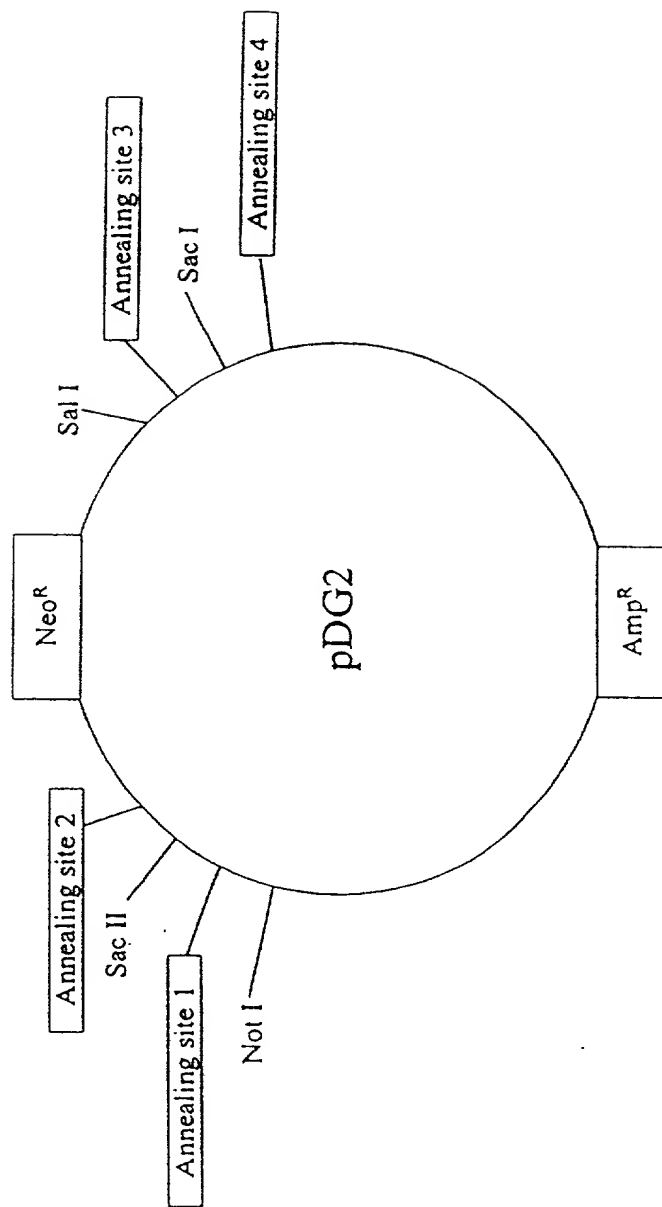


Figure 1





Plasmid Backbone

FIGURE 2A

FIGURE 2B

pDG2.

GTAACTACGTACGGTGGCACTTTTCGGGAAATGTGCGCGGAACCCCTATTTGTTATTTTCTAAATACATTCAAATA  
TGTATCCGCTCATGAGACAATAACCCGTGATAAATGCTTCAATAATATTGAAAAAGGAAGATGATGAGTATTCAACATTTC  
CGTGTGCGCCCTATTCCCTTTTTCGGGCACTTTTCCTTCTGTTTTCGCTACCCAGAAACGCTGGTGAAGTAAAGA  
TGCTGAAGATCAGTTGGGTGCAGAGTGGGTACATCGAAGTGGATCTCAACAGCGGTAAAGATCCTTGAGAGTTTTCGCC  
CCGAAGAACGTTTCTCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTGTGACGCGGGCAA  
GAGCAACTCGGTGCGCGCATACACTATTCTCAGAATGACTTGGTTGAGTACTCACCAGTCAAGAAAAGCATCTTACGGA  
TGGCATGACAGTAAGAGAATTATGCACTGCTGCCATAACCATGAGTGATAAAGTGGCCAACTTACTTCTGACAACGA  
TCGGAGGACCGAAGGAGCTAACCGCTTTTTCACAACATGGGGGATCATGTAACCTCGCTTGATCGTTGGGAACCGGAG  
CTGAATGAAGCCATACCAAACGACGAGCGTGACACCAGATGCTGTAGCAATGGCAACAACGTTGCGCAACTATTAAAC  
TGGGCAACTACTTACTCTAGCTTCCCGGCAACAATTAATAGACTGGATGGAGGCGGATAAAGTTGCAGGACCCTTCTGC  
GCTCGGCCCTTTCGGGCTGGCTGGTTTATTGCTGATAAATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCA  
CTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACAGACGGGGAGTCAGGCAACTATGGATGAACGAAATAG  
ACAGATCGCTGAGATAGGTGCGCTCACTGATTAGCAATTGGTAAGTGTGACAGCAAGTTTACTCATATATACTTTAGATTG  
ATTTACCCCGGTTGATAATCAGAAAAGCCCCAAAAACAGGAAGATTGTATAAGCAATATTTAAATGTATAAGCTTAATA  
TTTTGTTAAATTCGGTTAAATTTTTGTTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGCAAAATCCCTTAT  
AAATCAAAGAAATAGCCGAGATAGGGTTGAGTGTGTTCCAGTTTGGAAACAAGTCCACTATTAAGAACGCTGGACTC  
CAACGTCAAAGGCGCAAAAACCGTCTATCAGGCGGATGGCCCACTACGTGAACCATCACCCAAATCAAGTTTTTGGGGT  
CGAGGTGCGCTAAAGCACTAAATCGGAACCTTAAAGGAGCCCCGATTAGAGCTTGACGGGAAAGCGAACGTTGGCGA  
GAAAGGAAGGGAAGAAAGCGAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCGGTCAAGCTGCGCGTAAACCAACA  
CCCGCGCGCTTAATGCGCGCTACAGGGCGGTAAGGATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAA  
TCCCTTAAAGTGTAGTTTTGCTTCCACTGAGCGTCAGACCCGCTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTT  
CTGCGCGTAATCTGCTGCTTGAACAAAAAACCACCGCTACAGCGGTGGTTGTTTTCGGGATCAAGAGCTACCAAC  
CTTTTTCCGAAGGTAAGTGGCTTACGAGAGCGCAGATACCAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACC  
ACTTCAAGAACTCTGTAGCACCGCTACATACCTCGCTCTGCTAATCTGTTACCAGTGGCTGCTGCGGATGGCGATAAG  
TCGTGTCTTACCGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGGGCTGAACGGGGGTTGCTGCAC  
ACAGCCAGCTTGGAGCGAACGACCTACACCGAAGTGAATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCG  
AAGGGAGAAAGGCGGACAGGTATCCGTAAGCGGCGAGGTGGAACAGGAGAGCGCAGAGGGAGCTTCCAGGGGAAAC  
GCCTGGTATCTTTATAGTCTGTGCGGTTTCGCCACCTCTGACTTGAGCGTGCATTTTTGATGCTCGTCAGGGGGGCG  
GAGCCTATGAAAAACGCCAGCAACGCGGCTTTTACGGTTCCTGGCTTTTGTGCGCTTTTGTGCGCTTTTGTGCGCT  
AGTTAGCTCACTCATTAGGCACCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTTGAATGTGAGCGGATA  
ACAATTTACACAGGAAACAGCTATGACCATGATTAGCCAAAGTACGTAATACGACTCACTAGGCGGCGGCTTTAAAC  
AATGTGCTCCTCTTGGCTTGGTTCGCGGGCCAAGCCAGACAAGAACAGTTGACGTCAAGCTTCCCGGACCGCGTCT  
AGCGGCGCGCGAATCTCTGAGGATTCAGGGGCCCTGTCAGGTCAATCTACCGGGTAGGGAGGCGCTTTTCCCAAGG  
CAGTCTGGAGCATGCGCTTAGCAGCCCGCTGGCACTTGGCGCTACACAAGTGGCCTCTGGCTCGCACATTTCCACA  
TCCACCGGTAGCGCAACCGGCTCCGTTCTTGTGCGCCCTTCGCGCCACCTTCTACTCTCCCTAGTCAGGAAGTTC  
CCCCCGGCGCGCAGCTCGCGTGTGAGGACGTGACAAATGGAAGTAGCACGTCTCACTAGTCTCGTGAGATGGACAG  
CACCGCTGAGCAATGGAAGCGGTAGGCTTTGGGGCAGCGGCCAATAGCAGCTTGTCTCTTCCCTTTCTGGGCTCAGA  
GGCTGGGAAGGGTGGGTTCGGGGCGGGCTCAGGGCGGGCTCAGGGCGGGCGGGCGGAAGGTCTCCCGAGGCCCC  
GGCATTCTCGACGCTTCAAAGCGCAGCTGCGCGGCTGTTCTCCTCTTCTCATCTCGGGCTTTGACCTGACG  
CAATATGGGATCGGCCATTGAACAAGATGGATTGCAACGAGGTTCTCGGCGCTTGGGTGGAGAGCTATTTCGGCTATG  
ACTGGGCACAACAGACAATCGGCTGCTGATGCCGCGTGTTCGGCTGTGAGCGAGGGGCGCCCGTCTTTTTGTGTC  
AAGACCGACCTGTCCGGTGCCTGAATGAAGTGCAGGACGAGGCGCGCTATCGTGGTGGCCACGACGGGCGTTCC  
TTGCGCAGCTGTGCTGACGTTGTCACTGAAGCGGAAGGACTGGCTGCTATTGGGCGAAGTGCAGGGGCGAGGATCTCC  
TGTCTCTACCTTGTCTCTGCGGAGAAAGTATCCATCATGGCTGATGCAATGCGCGGCTGCATACGCTTGATCCGGCT  
AGTCCGCCATTTCGACCAACGAAAGCAACATCGCATCGAGCGAGCACGTAAGTGGATGGAAGCCGGCTTGTGCTGATCAGGA  
TGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAAGTGTTCGCCAGGCTCAAGGCGCGCATGCCGACGGCGATG  
ATCTCGTGTGACCCATGGCGATGCTGCTTGCAGAAATCATGGTGGAAAAATGGCGCTTTTCTGGATTCTGACTGT  
GGCGCGCTGGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATG  
GGCTGACCGCTTCTCGTCTTACGGTATCGCGCTCCCGATTTCGAGCGCATCGCTTCTATCGCTTCTTACAGGAT  
TCTTCTGAGGGATCGATCCGCTCTGTAAGTCTGCAAGAAATGATGATCTATTAACAATAAAGATGTCCACTAAATGG  
AAGTTTTTCTGTCTACTTTTGTAAAGAGGGTGAGAACAGAGTACCTACATTTGAATGGAAGGATTGGAGCTACGGGG  
GTGGGGGTGGGGTGGGATTAGATAAATGCTGCTCTTTACTGAAGGCTCTTTACTATTGCTTTATGATAATGTTTATAG  
TTGGATATCATAAATTAACAAGCAAAACCAAAATTAAGGGCCAGCTCATTCCTCCCACTCATGATCTATAGATCTATAGA  
TCTCTCGTGGGATCATTGTTTTCTCTTGATTCCCACTTTGTGGTTCTAAGTACTGTGGTTTCCAAATGTGTCAGTTTCA  
TAGCCTGAAGAAGGAGATCAGCAGCTCTGTTCCACATACACTTCACTTCAATGTTGTTTGGCAAGTTCTAATTCAT  
CAGAAGCTGACTCTAGATCTGGATCCGGCCAGCTAGGCGCTCGACCTCGAGTGATCAGGTACCAAGGTCTCGCTCTGTG  
TCCGTTGAGCTCGACGACACAGGACACGCAAAATTAAGGCGGGCCGTACCTCTAGTCAAGGCTTAAAGTGAAGTCTG  
TATTACGAGTGGCGCTGTTTTACAACGCTGCTGACTGGGAAAAACCTGGCGTTACCAACTTAATCGCTTGCAGCACA  
TCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCG  
AATGGCGCTTCCGTTGGTAATAAAGCCGCTTCGGCGGGCTTTTTTTT

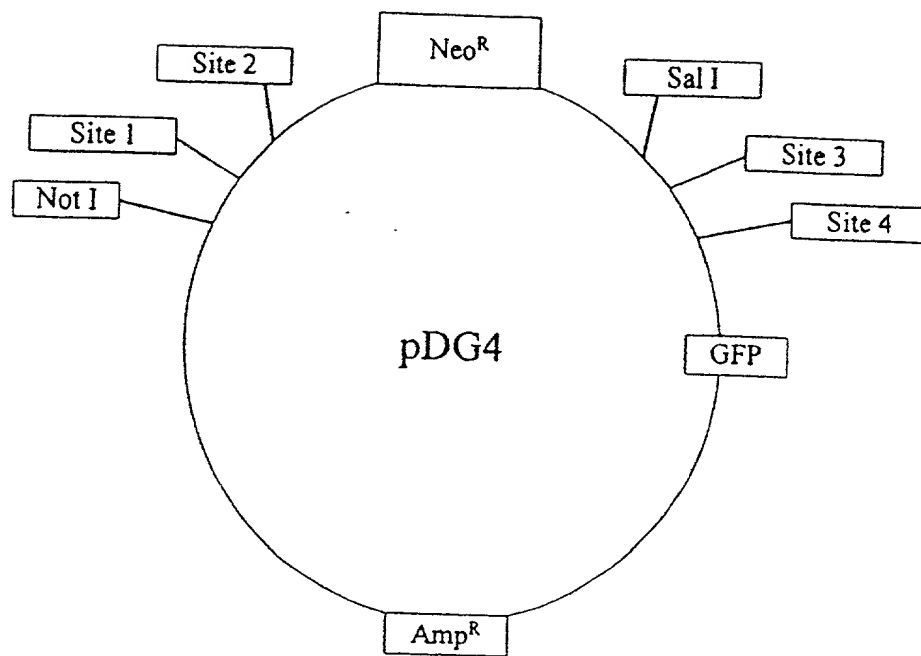


FIGURE 3A

FIGURE 3B

pDG4:

GTTTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCGCGTTACATAACTTACGGTAAATGG  
CCCGCTGGCTGACCGCCCAACGACCCCGCCCATTTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGA  
CTTTCCAATGACGTCAATGGGTGGAGTATTTACGGTAACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGT  
ACGCCCCCTATTGACGTCAATGACGAAATGGCCCGCTGGCATTAAAGCCAGTACATGACCTTATGGGACTTTCTTAC  
TTGGCAGTACATCTACGTATTAGTTCATCGCTATTACCATGGTGATGCGGTTTGGCAGTACATCAATGGGCGTGATAGC  
GGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTTGACGTCAATGGGAGTTGTTTTGGCACCAGAAATCAACGGGAC  
TTTCCAAAATGTCGTAACAACTCCGCCCATTTGACGCAATGGGCGTAGGCGTGACGGTGGGAGGTCTATATAAGCAG  
AGCTGGTTTAGTGAAACCGTCAGATCCGCTAGCGCTACCGGTCCGCCCATGGTGAGCAAGGGCGAGGAGCTGTTCAACGG  
GGTGGTGCCCATCTGGTTCGAGCTGGACGGGACGTAAACGGGCCAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATG  
CCACCTACGGCAAGCTGACCCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCACCCTCGTGACCACC  
CTGACCTACGGCGTGACGTGCTTCAGCGCTACCCCGACCATGAAGCAGCAGACTTCTTCAAGTCCGCCATGCCCGA  
AGGCTACGTCCAGGAGCGCACCCTCTTCTCAAGGACGACGGCAACTACAAGACCCGCGCGAGGTGAAGTTCGAGGGCG  
ACACCTGGTGAAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCTGGGGCACAAGCTGGAGTAC  
AACTACAACAGCCACAACTCTATATCATGGCCGCAAGCAGAAAGAACCGCATCAAGGTGAACCTTCAAGATCCGCCACA  
CATCGAGGACGGCAGCGTGAGCTCGCCGACCACTACCAGCAGAACACCCCATCGGCGAGGGCCCGTGCTGCTGCCCG  
ACAACCACTACCTGAGGACCCAGTCCGCCCTGAGCAAGACCCCAACGAGAAGCGGATCAGATGCTCTGCTGGAGTTC  
GTGACCGCGCGGGGATCACTCTCGGCGATGGACGAGCTGTACAAGTCCGGACTCAGATCCACCGGATCTAGATAACTGAT  
CATAATCAGCCATACCACTTTGTAGAGGTTTTACTTGCTTTAAAAAACCTCCACACCTCCCCCTGAACCTGAAACATA  
AAATGAATGCAATTTGTTGTTAACTTGTATTATGACGTTATAATGGTTACAAATAAGCAATAGCATCACAATTTT  
ACAAATAAAGCATTTTTTCACTGCTTCTAGTTGTGGTTTGTCCAACTCATCAATGTATCTTAACGCGAAGTACGTC  
GGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTCTAAATACATTCAAATATGTATCCGCTCAT  
GAGACAATAACCTGATAAATGCTTCAATAATATTGAAAAAGGAAGATATGAGTATTCAACATTTCCGTGTGCGCCCTTA  
TTCCCTTTTTTGCGGCATTTTGCCCTTCTGTTTTGCTCACCAGAAACGCTGGTGAAAGTAAAGATGCTGAAGATCAG  
TTGGGTGCACGAGTGGGTACATCGAACTGGATCTCAACAGCGGTAAAGTCTTGAGAGTTTTCGCCCCAAGAACGTTT  
TCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTGTGACGCGCGGCAAGAGCAACTCGGTC  
GCCGCATACACTATTCTCAGAACTGACTTGGTTGAGTACTCACCAGTCACAGAAAAGCATCTTACGGATGGCATGACAGTA  
AGAGAATTATGAGTGTGCGCATAACCATGAGTGATAACACTGCGGCCAAGTCTTCTGACAAACGATCGGAGGACCGAA  
GGAGCTAACCGCTTTTTTGCAACAATGGGGGATCATGTAATCGCCTTGATCGTTGGGAACCGGAGCTGAATGAAGCCA  
TACCAACGACGAGCGTGACACCAAGATGCTGTAGCAATGGCAACAGTTGCGCAACTATTAAGTGGCAACTACTT  
ACTCTAGCTTCCCGGCAACAATTAATAGACTGGATGGAGGCGGATAAAGTTGACGACCACTCTGCGCTCGGCCCTTCC  
GGCTGGCTGGTTTATGCTGATAAATCTGGAGCGGTGAGCGTGGGTCTCGCGGTATCATTCAGCACTGGGGCCAGATG  
GTAAGCCCTCCCGTATCGTAGTTATCTACAGACGGGGAGTCAGGCAACTATGGATGAACGAAATAGACAGATCGCTGAG  
ATAGGTGCGCTCACTGATTAAGCATTGGTAAGTGTGACACCAAGTTTACTCATATATACCTTTAGATTGATTTACCCCGGT  
GATAATCAGAAAAGCCCCAAAAACAGGAAGATTGTATAAGCAATATTTAAATTTGTAACGTTAATAATTTGTTAAAT  
CGCGTTAAATTTTGTAAATCAGCTCATTTTAAACCAATAGGCGGAAATCGGCAAAATCCCTTATAAATCAAAAGAA  
AGCCCCGAGATAGGGTTGAGTGTGTTCCAGTTTGGAAACAGAGTCCACTATTAAGAAGCTGGACTCCAACGTCAAAGGG  
CGAAAAACCGTCTATCAGGGCGATGGCCCACTACGTGAACCATCACCCAAATCAAGTTTTTGGGGTCGAGGTGCGGTAA  
AGCACTAAATCGGAACCTAAAGGGAGCCCCGATTAGAGCTTGACGGGAAAGCGAAGCTGGCGAGAAAGGAAGGGAA  
GAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCGGTACGCTGCGCGTAACCCACACCCCGCGCTTA  
ATGCGCGCTACAGGGCGCGTAAAGGATCTAGGTGAAGATCTTTTGTAAATCTCATGACCAAAATCCCTTAAAGCTGA  
GTTTTCGCTTCACTGAGCGGTGACACCCGCTAGAAAAGATCAAGGATCTTCTTGGAGTCTTTTTCGCGCGTAATCT  
GGTGCTTGAACAACAAAAACCCAGCTACAGCGGTGGTTTGTGTCGGATCAAGAGCTACCAACTCTTTTCCGAAG  
GTAAGTGGCTTACGAGAGCGCAGATACCAATACTGTTCTTCTAGTGTAGCGGTAGTTAGGCGACCACTTCAAGAACTC  
TGAGACCGCTACATACCTCGCTCTGCTAATCTGTTACAGTGGCTGCTGCCAGTGGCGATAAGTGTGCTTACCG  
GGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCCGGCTGAACGGGGGTTCTGTCACACAGCCAGCTTG  
GAGCGAACGACCTACCCGAACCTAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCGAAGGGAGAAAGGC  
GGACAGGTATCCGGTAAGCGGCGAGGTCCGAAACAGGAGCGCACAGGGAGCTTCCAGGGGAAACGCTGATCTTT  
ATAGTCTGTGCGGTTTCGCCACCTCTGACTTGAGCGTCAATTTTGTGATGCTCGTACGGGGCGGAGCCTATGGAAA  
AACGCCAGCAACGCGGCTTTTACGGTTCTGGCCTTTTGTGCGCTTTTGTCTCACATGTAATGTGAGTTAGCTCACTC  
ATTAGGACCCCGAGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTTGAATTTGAGCGGATAACAATTTACACA  
GGAAACAGCTATGACCATGATTACGCCAAGCTACGTAATACGACTCACTAGGCGGCGCGTTTAAACAATGTGCTCCT  
TTGGCTTGTCTTCCGCGGCGCAAGCCAGACAAGAACCACTGTGACGTCAAGCTTCCCGGACGCGTGTAGCGGCGCGCGA  
ATTCTGACAGATTGAGGGCCCTGACAGTCAATTTACCGGGTAGGGGAGGCGCTTTTCCAGGCAGTCTGGAGCAT  
GCGCTTTAGCAGCCCGCTGGCACTTGGCGCTACACAAGTGGCTTGGCGCTCGCACATTTCCACATCCACCGGTAGCG  
CCAACCGGCTCCGTTCTTGGTGGCCCCCTCGCGCCACCTTCTACTCTCCCTAGTCAGGAAGTTCCCCCGCGCCCGC  
AGCTCGCGTCTGACAGGACGTGACAAATGGAAGTAGCAGCTCTCACTAGTCTCGTGACAGTGGACAGCAGCTGAGCAA  
TGGAGCGGGTAGGCTTTGGGGCAGCGGCAATAGCAGTTTGTCTTCTGCTTTCTGGCTCAGAGCTGGGAAGGG  
TGGGTCCGGGGCGGGCTCAGGGCGGGCTCAGGGGCGGGCGGCGGAAGGTCTCCGAGGCGCGGCTTCTCGCAC  
GCTTCAAAAGCGCAGCTGCGCGCTGTTCTCTCTCTCTCATCTCCGGCTTTTCCAGCTGACGCAATATGGGATCG  
GCCATTGAACAAGATGGATTGACGCGAGTTCTCGGCGCTTGGGTGGAGAGGCTATTCCGCTATGACTGGGCACAACA  
GACAATCGGCTGCTCTGATGCGCGCTGTTCCGGCTGTGACGCGAGGGGCGCGCGTTCTTTTGTCAAGACCGACTGT  
CCGGTGCCTGAATGAAGTGCAGGACGAGGACGCGGCTATCGTGGCTGGCCACGACGCGGCTTCTTGGCAGCTGTG  
CTCAGCTTGTCACTGAAGCGGAAGGGACTGCTGCTATTGGGCGAAGTGGCGGCGAGGATCTCTGTCTCATCTACCT

TGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTG  
ACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA  
GAGCATCAGGGGCTCGCGCCAGCCGAACGTGTCGCCAGGCTCAAGGCGCGCATGCCGACGGCGATGATCTCGTCGTGAC  
CCATGGCGATGCCTGCTTGCCGAATATCATGGTGAAAAATGGCCGCTTTCTGGATTATCGACTGTGGCCGGCTGGGTG  
TGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC  
CTCGTGCTTTACGGTATCGCCGCTCCCGATTGCGAGCGCATCGCCTTCTATGCGCTTCTTGACGAGTTCTTCTGAGGGGA  
TCGATCCGTCCTGTAAGTCTGCAGAAATTGATGATCTATTAACAATAAAGATGTCCACTAAAATGGAAGTTTTCCTGT  
CATACTTTGTTAAGAAGGGTGAGAACAGAGTACCTACATTTTGAATGGAAGATTGGAGCTACGGGGTGGGGTGGGGT  
GGGATTAGATAAATGCCTGCTCTTTACTGAAGGCTCTTTACTATTGCTTTATGATAATGTTTCATAGTTGGATATCATAA  
TTTAAACAAGCAAAACCAAATTAAGGGCCAGCTCATTCTCCCACTCATGATCTATAGATCTATAGATCTCTCGTGGGAT  
CATTGTTTTCTCTTGATTCCCACTTTGTGGTTCTAAGTACTGTGGTTTCCAAATGTGTCAGTTTCATAGCCTGAAGAAC  
GAGATCAGCAGCCTCTGTTCCACATACATTCATTCTCAGTATTGTTTTGCCAAGTTCTAATCCATCAGAAGCTGACTC  
TAGATCTGGATCCGGCCAGCTAGGCCGTGACCTCGAGTGATCAGGTACCAAGGTCTCGCTCTGTGTCCGTGAGCTCG  
ACGACACAGGACACGCAAATTAATTAAGGCCGGCCCGTACCCTCTAGTCAAGGCCCTTAAGTGAGTCGTATTACGGACTGG  
CCGTGTTTTACAAAGTCGTGACTGGGAAAAACCTGGCGTTACCCAACTTAATCGCCTTGACGACATCCCCCTTTCGCC  
AGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTCG  
TTGTAATAAAGCCCGCTTCGGCGGGCTTTTTTTT

FIGURE 3B (Continued)



Annealing site	Sequence	Sequence after digestion
1	5' AATgtgctcctcttttggcttggttCCGC 3' 3' Ttacacgaggagaaacccaaggaagg 5'	5' AA 3' Ttacacgaggagaaacccaaggaagg 5'
2	5' AActgggttcttgtctgtggttggCCCGC 3' 3' Ttgaccaagaacagacccaaggaaccggg 5'	5' AA 3' Ttgaccaagaacagacccaaggaaccggg 5'
3	5' AAggtcctcgcgtctgtgtccgttGAGCT 3' 3' Ttccaggagcgagacacaggaac 5'	5' AA 3' Ttccaggagcgagacacaggaac 5'
4	5' AAttgctgtcctgtgtcgtcGAGCT 3' 3' Ttaaacgcacaggacacagcagc 5'	5' AA 3' Ttaaacgcacaggacacagcagc 5'

FIGURE 5

FIGURE 6

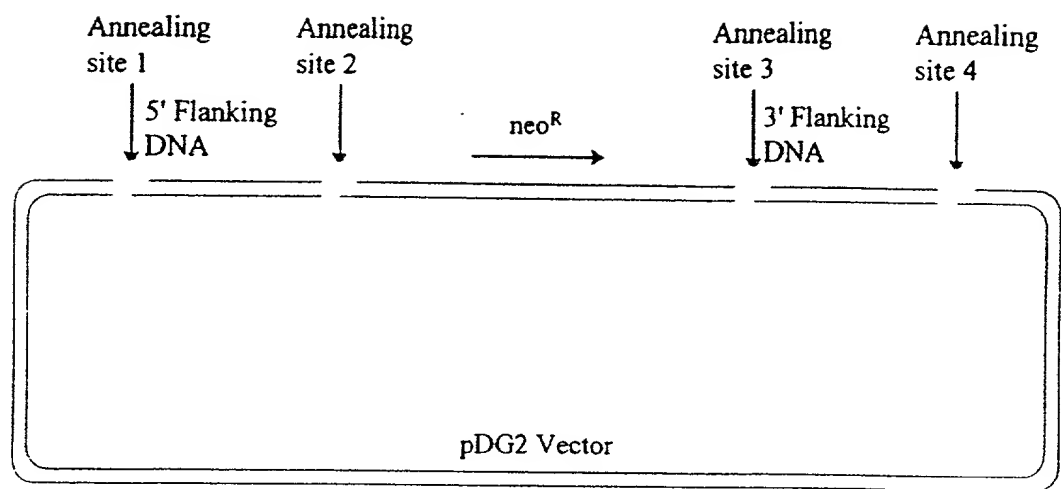
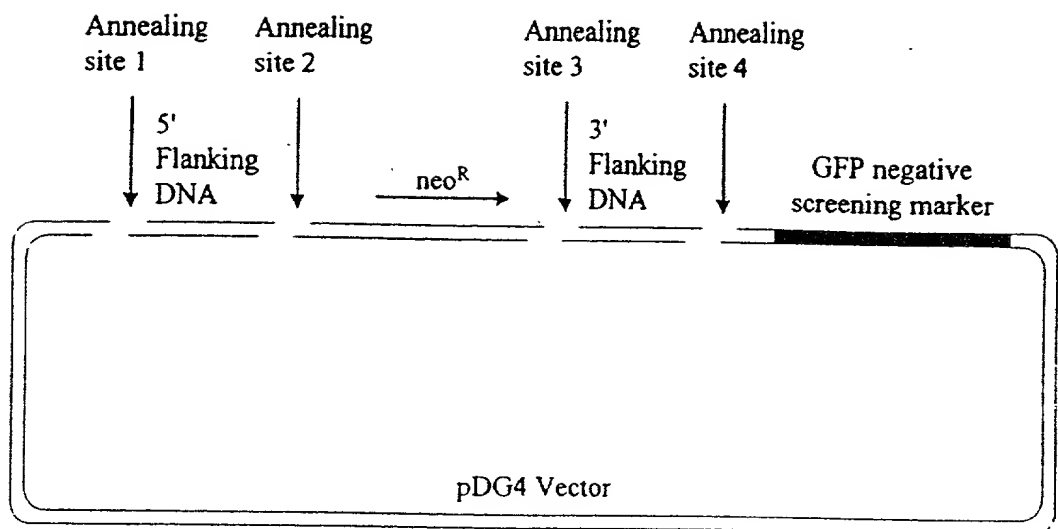


FIGURE 7



TTCCTGACAAGACTATGTCCACTCAGGAGCCCCAGAAGAGTCTTCTGGGTTCTCTCAACTCCAATGCCAC  
 CTCTCACCTTGGACTGGCCACCAACCAGTCAGAGCCTTGGTGCCCTGTATGTGTCCATCCCAGATGGCCTC  
 TTCCTCAGCCTAGGGCTGGTGAGTCTGGTGGAGAATGTGCTGGTTGTGATAGCCATCACC AAAAACCGCA  
 ACCTGCACTCGCCCATGTATTACTTCATCTGCTGCCCTGGCCCTGTCTGACCTGATGGTAAGTGTGAGCAT  
 CGTGCTGGAGACTACTATCATCCTGCTGCTGGAGGTGGGCATCCTGGTGGCCAGAGTGGCTTTGGTGACAG  
 CAGCTGGACAACCTCATTGACGTGCTCATCTGTGGCTCCATGGTGTCCAGTCTCTGCTTCCTGGGCATCA  
 TTGCTATAGACCGCTACATCTCCATCTTCTATGCGCTGCGTTATCACAGCATCGTGACGCTGCCAGAGC  
 ACGACGGGCTGTCTGGGCATCTGGATGGTCAGCATCGTCTCCAGCACCTCTTTATCACCTACTACAAG  
 CACACAGCCGTTCTGCTCTGCCTCGTCACTTTCTTTCTAGCCATGCTGGCACTCATGGCGATTCTGTATG  
 CCCACATGTTACAGAGAGCGTGCCAGCACGTCCAGGGCATTGCCAGCTCCACAAAAGGCGGCGGTCCAT  
 CCGCCAAGGCTTCTGCCTCAAGGGTGCTGCCACCCTTACTATCCTTCTGGGGATTTCTTCTGTGCTGG  
 GGCCCTTCTTCTGCTCATCTTGTCTCATCGTCTCTGCCCTCAGCACCCACCTGCAGCTGCATCTTCA  
 AGA ACTTCAACCTCTTCTCTCTCTCATCGTCTCTCAGCTCCACTGTTGACCCCTCATCTATGCTTTCCG  
 CAGCCAGGAGCTCCGCATGACACTCAAGGAGGTGCTGCTGTGCTCCTGGTGATCAGAGGGCGCTGGGCAG  
 AGGGTGACAGTGATATCCAGTGGCTGCTGTGTGAGACCACAGGTACTCATCCCTCCTGATCTCCATT  
 TGTCTAAGGGTCGACAGGATGAGCTTTAAATAGAAACCCAGAGTGCCTGGGGCCAGGAGAAAGGGTAAC  
 TGTGACTGCAGGGCTCACCCAGGGCAGCTACGGGAAGTGGAGGAGACAGGGATGGGA ACTCTAGCCCTGA  
 GCAAGGGTCAGACCACAGGCTCCTGAAGAGCTTCACTCTCCCCACCTACAGGCAACTCCTGCTCAAGCC  
 (SEQ ID NO: 19 )

**Targeting Vector (5' arm; 200 bp flanking neo insert):**

CCGACAACAACATGAAGTGAATCAGAAGCTGGGGGCTGATACCACCTGGAGCTGCAG  
 CCTCCACAGACCGCTTCTACTTCTGACAAGACTATGTCCACTCAGGAGCCCCAGAA  
 GAGTCTTCTGGGTTCTCTCAACTCCAATGCCACCTCTCACCTTGGACTGGCCACCAACC  
 AGTCAGAGCCTTGGTGTCTGTATGTG (SEQ ID NO: 20 )

**Targeting Vector (3' arm; 200 bp flanking neo insert):**

GACTACTATCATCCTGCTGCTGGAGGTGGGCATCCTGGTGGCCAGAGTGGCTTTGGTG  
 CAGCAGCTGGACAACCTCATTGACGTGCTCATCTGTGGCTCCATGGTGTCCAGTCTCT  
 GCTTCTGGGCATCATTGCTATAGACCGCTACATCTCCATCTTCTATGCGCTGCGTTAT  
 CACAGCATCGTGACGCTGCCAGAG (SEQ ID NO: 21 )

FIG. 8